

**BLM Montana
State Office**

**BLM Butte
Field Office**

**Montana
Weed Control
Association**

**Montana War
on Weeds**

**Statewide
Noxious
Weed
Awareness &
Education
Campaign**

**Team Leafy
Spurge**

**Weed District
Coordinators**

**County
Extension
Agents**



“One of the BLM’s highest priorities is to promote ecosystem health and one of the greatest obstacles to achieving this goal is the rapid expansion of weeds across public lands.”

(<http://www.blm.gov/weeds>, 07 July 2003)

Noxious and invasive weeds are spreading across the western US, threatening native plant communities, the animals that depend on them, recreational opportunities, and people’s livelihoods. They cause degradation of soil functions, such as the water cycle, nutrient cycle, and energy flow, leading to increasing sediments in streams, lower water tables, and depressed soil fertility. Dense infestations promote desertification of the landscape. Land values can decline up to 85 percent from noxious weed infestations as well as reducing rangeland livestock carrying capacity. Moreover, millions are spent annually on herbicides and biocontrol agents to try and control and prevent the spread of weeds.

Montana, itself, has millions of acres of invasive weeds, and the numbers are increasing exponentially every year. Total direct and secondary economic impacts of knapweed exceed \$42 million annually (equal to about 518 jobs). (Leitch, Leistritz, & Bangsund, 1996) Many of these weeds are on public lands, and our Butte Field Office, Bureau of Land Management (BLM), is committed to supporting cooperative Integrated Weed Management to reduce the amount of damage caused by weeds.

A WEED BY ANY OTHER NAME

- **Weed**

A plant growing where you don’t want it.

- **Invasive Weed**

A weed which originated outside of North America, so it has few, or no, natural controls here.

- **Noxious Weed**

An invasive weed defined by Montana law as rendering land unfit for agriculture, livestock, forestry, wildlife, or other beneficial uses or harming native plant communities. There are currently 31 statewide noxious weeds, four new ones just this year. Individual weed districts can determine additional species to be locally noxious. (Information taken from the Montana County Noxious Weed Control Act (MCA 122-2101 through 7-22-2153)) Some federal government agencies can also select certain species for weed management.

SO WHAT’S INTEGRATED WEED MANAGEMENT?

Integrated weed management uses several weed management techniques in a well-planned, coordinated, and organized program to control, eradicate, and prevent the spread of weeds. It involves working with all land owners and users in a team effort to solve weed problems. An important component is education, one of the strongest methods to prevent the spread of weeds. A few examples of more active attacks on existing problems are:

- **Biological methods**

Insects, pathogens, and nematodes.

- **Chemical**

Selective broadleaf herbicides.

- **Cultural**

Grazing, crop planting schedules, revegetation.

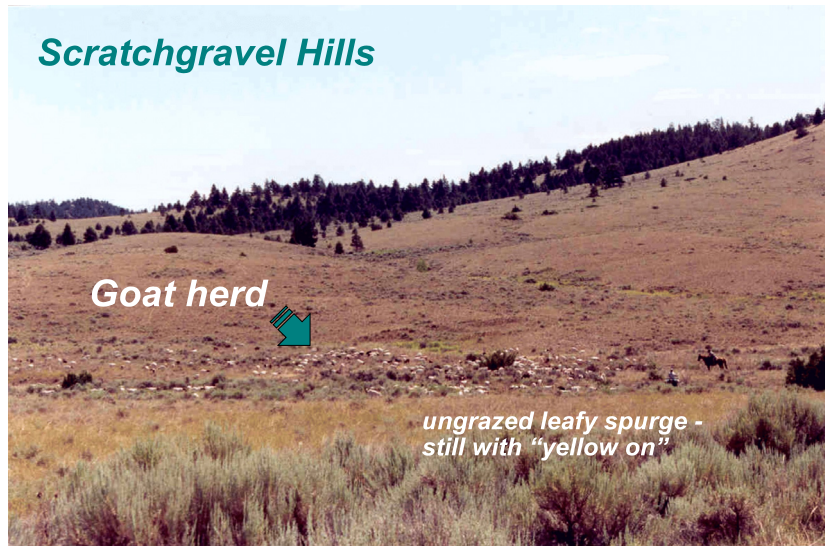
- **Physical and Mechanical**

Hand-pulling, mowing, tilling, hoeing, mulching, and burning.

BUTTE FIELD OFFICE INITIATIVES

The Butte Field Office is working on some special weed projects in addition to its daily and annual weed management. Three highlight projects are:

- **Scratch Gravel Hills**



The Butte Field Office is experimenting with controlling and decreasing **leafy spurge** infestations using goat grazing in combination with biocontrol agents such as flea beetles (*Aphthona lacertosa*, *Aphthona nigriscutis*) and hawk moths (*Hyles euphorbiae*). Goats are moved through areas to “eat the yellow off,” the “yellow” being leafy spurge flowers. This prevents seed dispersal and stresses the plant’s reserves of carbohydrates. Other parts of the plants are eaten by biocontrol agents; flea beetles eat root tissue while hawk moths defoliate plants. This combination has successfully controlled several leafy spurge infestations in the west.

Many of the flea beetle releases are from collections made in cooperation with the BLM, **Lewistown Office**. The hope is these insects will thrive and establish larger populations, so the Butte Field Office can eventually collect these insects from home ground.



- **Whitehall High School; Todd Breitenfeldt**

The Butte Field Office is working in conjunction with and supplying grants to an insectory which locally collects biocontrol agents for leafy spurge and spotted knapweed. High school students are led by a biology teacher, Todd Breitenfeldt, to collect, feed, release, and provide insects to other groups.

From this insectory, the Butte Field Office in 2003 has received and released

Spurge stem borers (*Oberea erythrocephala*)

Knapweed flower weevils (*Larinus minutus*)

- **Research; Montana State University - Bozeman**

The Butte Field Office cooperates and assists researchers on topics such as:

Wildfire Impacts and Post Fire Revegetation; where the spread of noxious weeds after fires and the effectiveness of revegetation at preventing this spread are examined.

Bacterial Pathogens on **Houndstongue**; where a new biocontrol agent is being field tested on BLM lands and other areas.

WHAT CAN YOU DO TO HELP?

Educate yourself about weeds by contacting [Statewide Noxious Weed Awareness & Education Campaign](#), your local [Weed District Coordinator](#), [County Extension Agent](#), or websites devoted to noxious weeds.

Prevent weed spread by washing the underbody of your car and ATV, brushing horses, dogs, clothing, and boots. [Spotted knapweed](#) is spread primarily by vehicles. Houndstongue, a plant toxic to horses and cattle, is usually spread by burrs catching in animal fur or clothing.

Join a weed control association, form a weed prevention group for your neighborhood, encourage a club to sponsor weed education at your local school, or participate in a weed pull day.

REMEMBER

Those pretty flowers may be the greatest threat to our environment and economy.
Together, we can control this ***Biological Wildfire!***

References

- Biological Control: Cornell University <http://www.nysaes.cornell.edu/ent/biocontrol>
- Biology and Management of Noxious Rangeland Weeds. Sheley, Roger L. & Janet K. Petroff, Eds. 1999. Oregon State University Press; Corvallis, Oregon.
- Montana Weed Control Association [http:// www.mtweed.org](http://www.mtweed.org)
- Montana War on Weeds <http://.mtwow.org>
- Montana State University Extension Service <http://extn.msu.montana.edu>
- USDA-APHIS PPQ Bozeman, MT & USDA-ARS Team Leafy Spurge <http://www.team.ars.usda.gov/cdgallery/galleryintro.html>
- U.S. Dept. of Interior; Bureau of Land Management <http://www.blm.gov/nhp/index.htm>
- Weeds of the West. Whitson, Tom D., Ed. 2000. University of Wyoming; Jackson, Wyoming.

WEED DISTRICT COORDINATORS

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LINKS

Side Bar:

BLM Montana State Office	http://www.mt.blm.gov
BLM Butte Field Office	http://www.mt.blm.gov/bdo/index.html
MT Weed Control Assoc.	http://www.mtweed.org
MT War on Weeds	http://mtwow.org
Statewide Noxious Weed Awareness & Education Campaign	http://www.weedawareness.org
Team Leafy Spurge	http://www.team.ars.usda.gov
Weed District Coordinators	
County Extension Agents	

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leafy spurge	http://mtwow.org/Euphorbia-esula.html
Aphthona lacertosa	http://www.nysaes.cornell.edu/ent/biocontrol/weedfeeders/a.lacertosa.html
Aphthona nigriscutis	http://www.nysaes.cornell.edu/ent/biocontrol/weedfeeders/a.nigriscutis.html
Hyles euphorbiae	http://www.nysaes.cornell.edu/ent/biocontrol/weedfeeders/hyles.html
BLM Lewistown Office	http://mtso0www.corp.blm.gov/ldo/
Oberea erythrocephala	http://www.nysaes.cornell.edu/ent/biocontrol/weedfeeders/oberea.html
Larinus minutus	http://www.nysaes.cornell.edu/ent/biocontrol/weedfeeders/larinus_minutus.html
Statewide Noxious Weed Awareness & Education Campaign	http://www.weedawareness.org
Weed District Coordinators	
County Extension Agents	
Spotted knapweed	http://www.mtweed.org/Identification/Knapweed/knapweed.html
Houndstongue	http://www.mtwow.org/houndstongue.html